CLAIM AMENDMENTS

Cancel Claims 1-19.

Add new Claims 20-41:

B1

--20. (New) A method for producing an osteoclast precursor cell, which comprises culturing a hematopoietic stem cell derived cell obtained from peripheral blood or joint fluid in an essential medium for mammalian cells, optionally with added serum, in the absence of any additional cytokine(s) for at least 1 to 3 weeks to obtain an osteoclast precursor cell.

21. (New) The method of Claim 20, wherein said essential medium for mammalian cells contains serum.

22. (New) The method of Claim 20, wherein said hematopoietic stem cell derived cell is obtained from the mononuclear fraction of peripheral blood.

23. (New) The method of Claim 20, wherein said hematopoietic stem cell derived cell is obtained from the cellular fraction of joint fluid.

24. (New) The method of claim 20, wherein said hematopoietic stem cell derived cell is cultured at a temperature ranging from 35 - 37°C in 5 - 7 % $C0_2$-containing air for 1 - 3 weeks.

25. (New) An osteoclast precursor cell, which is obtainable by the method of claim 20.

26. (New) A method for producing an osteoclast, comprising:

culturing an osteoclast precursor cell obtained by the method of Claim 20 in the absence of accessory cells in a culture medium comprising one or more compound(s) selected from the group consisting of IL-3, IL-7, GM-CSF, eotaxin, eotaxin-2, and eotaxin-3, and

recovering or isolating an osteoclast.

27. (New) The method of Claim 26, wherein said osteoclast precursor cell is

obtained by culturing a cell from joint fluid.

28. (New) The method of Claim 26, wherein said osteoclast precursor cell is obtained by culturing a cell from peripheral blood.

29. (New) The method of Claim 26, wherein said culture medium comprises IL-3.

30. (New) The method of Claim 26, wherein said culture medium comprises IL-7.

31. (New) The method of Claim 26, wherein said culture medium comprises GM-CSF.

32. (New) The method of Claim 26, wherein said culture medium comprises eotaxin.

33. (New) The method of Claim 26, wherein said culture medium comprises eotaxin-2.

34. (New) The method of Claim 26, wherein said culture medium comprises eotaxin-3.

35. (New) The method of Claim 26, wherein said culture medium comprises a culture supernatant of mitogen-stimulated peripheral blood mononuclear cells.

36. (New) The method of Claim 26, wherein said culture supernatant comprises a supernatant of phytohemagglutinin-stimulated human peripheral blood mononuclear cells.

37. (New) An osteoclast, which is obtainable by the method of claim 26.

38. (New) A method for screening an agent for treating or preventing a metabolic bone disease, which comprises contacting an osteoclast precursor cell isolated by the method of claim 20 with an agent to be tested, and measuring the inhibitory activity of said agent on differentiation of the osteoclast precursor into an osteoclast.

39. (New) A method for screening an agent for treating or preventing a metabolic bone disease, which comprises using the osteoclast precursor cell of Claim 20.

40. (New) A method for screening an agent for the treatment or prevention of a

metabolic bone disease, which comprises contacting the osteoclast of Claim 37 with a agent to be tested and measuring inhibitory activity of said agent on the bone resorption activity of said osteoclast.

41. (New) An agent for treating or preventing a metabolic bone disease which is obtainable by the method of Claim 40.